

## **Photothermal Characterization of Carbon Nanotubes Composite Materials**

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Carbon nanotubes represent one of the most important materials in nanoscience and nanotechnology. Due to the outstanding structural, mechanical, electrical and thermal properties of carbon nanotubes, it has been shown that when incorporated in a polymeric matrix they can improve its physical properties. However, several questions remain unsolved, especially those related with the properties of the interface of the nanotubes and the polymeric matrix [1,2]. In this work, thermal diffusivity measurements of composite materials prepared from a homogeneous mixture of carbon nanotubes in a polyester resin were performed using photothermal radiometry [3]. The results show an increase of the thermal diffusivity when the volume fraction of carbon nanotubes grows. It is also shown that this increase depends strongly on the diameter of the nanotubes.

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